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41,733
Reg. No.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of

Applicant : McCown et al.
Serial No. : 09/057,313
Filed : April 8, 1998
Title : CONTAINER TRANSPORTATION SYSTEM AND METHOD
Docket : 033449-002
Examiner : O'Connor
Art Unit : 3627

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

RESPONSE

This paper is filed in response to the Office action mailed August 11, 2006. Review and reconsideration in light of the comments below are respectfully requested.

At paragraph 6 of the Office action, claims 16-19, 21, 22, 25, 26, 28, 32, 35, 38, 39, 42-44, 46-48, 50-55, 57-59, 61-63, 65, 66 and 70-75 are rejected as being unpatentable over allegedly admitted prior art. More particularly, the Office action takes the position that all of the apparatus recited as being used by the claimed process are "conventional in nature" and "used in a conventional/known manner." The Office action indicates that some of the shapes/values/

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dimensions/proportions of the claimed apparatus are not disclosed in the prior art, but are not deemed to be sufficient to patentably distinguish the claims.

However, it is submitted that the Office action does not make a proper *prima facie* showing of obviousness, on several distinct bases, as are described in greater detail below.

Particularity

As an initial matter, it is noted that the Office action does not refer to any particular portion of the specification where the alleged admissions of prior art can be found. The originally-filed Application is eighteen pages long, including claims and drawings, and the originally-filed specification is nine pages long. It is noted that MPEP § 2141, citing *Graham v. John Deere*, 383 U.S. 1, (1966), provides the framework for making a proper obviousness rejection, and indicates that:

Under § 103, the scope and content of the prior art are to be determined;
differences between the prior art and the claims at issue are to be ascertained;
and the level of ordinary skill in the pertinent art resolved.

More particularly, MPEP § 2141 specifically indicates that the first step for determining obviousness is "determining the scope and content of the prior art." In addition, as noted at MPEP § 2142, the Examiner bears the initial burden of supporting an alleged *prima facie* case of obviousness. MPEP § 2142 also specifies that:

A statement of a rejection that includes a large number of rejections must explain with **reasonable specificity** at least one rejection, otherwise the Examiner procedurally fails to establish a *prima facie* case of obviousness.

[bold emphasis added]

In this case, the rejection merely refers to the "written specification" of this Application. Applicant is left to guess as to which particular passages, disclosures or drawings the Office had in mind when making the rejection. Accordingly, it is submitted that, on this basis, the Office action does not meet the *prima facie* case of obviousness, and a more specific explanation of the rejection is requested such that Applicant can more fully respond.

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Prior Art as an Admission

In an attempt to further prosecution, Applicant has reviewed the specification to attempt to determine which passages the Office action may be referring to in its rejection. It is noted that in the "Background" section of the Application, the transportation of containerized freight utilizing container ships and cranes is described. However, this is, of course, entirely distinct from the claimed method. For example, with respect to claim 16 as an example, if the Background section of the Application provides the basis for the alleged admitted prior art, the allegedly admitted prior art does not disclose at least the providing, accessing, lifting and transporting, positioning and securing steps of claim 16.

It is also noted that the Application describes that each container is of a generally "conventional design" (page 5, line 24) and that the reach stacker is "conventional" (page 7, line 17). As an initial matter, it is noted that simply because something is described as being "conventional" is by no means an admission of any prior art status. Under MPEP §2141.01, it is the applicable patent law statutes (35 U.S.C. § 102(a), 102(b), 102(e), etc.) which determine whether a reference is available as prior art. In this case, no dates are provided relative to the allegedly admitted prior art, and therefore the Office action does not make a proper identification of any prior art status. For example, something that is "conventional" at the time of filing a patent application may not necessarily be old enough to be prior art.

It is possible that, in making the rejection, the Office action may be relying upon MPEP §2129. That section indicates that subject matter may be prior art when the specification identifies work by another as "prior art." However, that is not the case here. In fact, the phrase "prior art" does not appear to be included anywhere in the text of the application. Thus it is submitted that reliance upon MPEP §2129 is improper. In any case, it is submitted that the application does not include any admitted prior art, and that the Office action does not make a sufficient showing that any passages of the Application are prior art.

Particular Limitations

In any case, even if certain containers and reach stackers are admitted to be prior art, many other claimed features of the claimed invention are not admitted prior art. For example, claim 16 specifies that the ramp and storage deck have sufficient strength to support a reach stacker when the reach stacker is transporting a fully loaded one of the container. It should be appreciated that a reach stacker is a large, specially adapted, heavy-duty vehicle with a spreader attachment that is configured to grip a container at its corner castings. For example, it is noted that the Office previously relied upon the Kalmar reference which discloses reach stackers. The Kalmar reference, at page 3, discloses that the reach stackers of that reference weigh 36,400 kg, 40,000 kg and 37,300 kg respectively. The Kalmar reference also specifies that the lifting capacity of the reach stackers are up to 8 and 10 tonnes. Under metric conversation, 1 tonne is equal to 1000 kg, thereby placing the fully loaded reach stackers of the Kalmar reference at 46,400 kg (102,294 lbs) 50,000 kg (110,231 lbs) and 47,300 kg (104,278 lbs).

It is normal and standard engineering design to select and design decks and ramps that are sufficient to support the expected loads, with the inclusion of a safety factor. However, it is wasteful and inefficient to design ramps and decks with a weight bearing load far surpassing the expected load limit. In this case, it is submitted that driving a fully loaded reach stacker over a ramp and on a deck is not "conventional" and therefore it is clearly not acknowledged in any cited art to provide a ramp and a deck having sufficient strength to support a fully loaded container and reach stacker. Thus, even if the Application does included admitted prior art, the "base" structural limitations of the claims are not disclosed.

New Use for Existing Device

Furthermore, even if all of the structure utilized in the method claims is known in the prior art, this by no means dictates that a method of use of such components, or a system utilizing such components, is unpatentable. Indeed, there are many patentable methods of existing components (for example, use of known chemical compounds in a novel process, use of

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a known foam in a novel manner as a trampoline material, etc.) As is specified in MPEP §2112.02, the new and unobvious use of an old structure may be patentable. As further noted in MPEP §2116.01, all the limitations of a claim must be considered, and proper claim construction requires treating language in a process claim which requires making or using of a non-obvious product as a material limitation.

The Office action indicates that the allegedly admitted prior art includes "all of the apparatus" used by the process steps, that is "used in a conventional/known manner." However, Applicant disagrees with this statement. More particularly, Applicant does not agree that a reach stacker, being driven over a ramp to a storage deck of a marine vessel, is disclosed in the Application to be a conventional/known use. Instead, it is submitted that there are no passages of the Application that support this position, and that the Application cannot be properly used as a primary reference in the manner proposed in the Office action.

Beam-to-length ratio

Assuming that: 1) the Office action shows the allegedly admitted prior art with sufficient specificity; 2) the Application includes an admission of prior art status; 3) the Application discloses all of the "base" structural limitations of the claims; and 4) the disclosure of the base structure inherently teaches the use of the base structure in the claimed manner, the Office action then admits that certain shapes, values, dimensions, properties, etc., are not shown in the allegedly admitted prior art. However, the Office action takes the position that these features are merely obvious variations over the allegedly admitted prior art. For example, with respect to claims 16-19, 21, 22, 25, 26, 28, 32, 35, 38, 39, 42-44, 46-48, 50-52 and 70-75, the Office action takes the position that the prior art does not disclose a marine vessel having a beam of about, or at least about, one-quarter of its length.

The Office action then concludes that it would have been obvious to one of ordinary skill in the art to have used a marine vessel having a beam of about, or at least about, one-quarter of its length. As the basis for this rejection, the Office action takes a position that it has been held

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that merely discovering an optimum value of a result-effective variable involves only routine skill in the art, citing to *In re Boesch*, 617 F.2d 272 (CCPA 1980).

However, it is noted that the claimed beam-to-length ratio is not shown in any cited art, and the Office action relies solely upon *In re Boesch* as the basis for the rejection. As noted under MPEP § 2144:

If the facts of a prior legal decision are sufficiently similar to those in an application under examination, the Examiner may use the rational used by the Court. If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely *solely* on case law as the rational to support an obviousness rejection.

(emphasis in original)

In this case, the facts of the *Boesch* case are quite dissimilar to those in this Application, and in fact the *Boesch* case does not support the rejection. More particularly, the *Boesch* case addressed a rejection of claims directed to a nickel-based alloy having specific ranges of materials. For example, claim 1 of the application at issue in that case specified certain percentages of carbon, cobalt, chromium, etc. and nickel with the elements being balanced to provide a specific "N" value and having certain other properties. The N value refers to the average electron vacancy concentration of the alloy.

The prior art cited in that case disclosed nickel based alloys having ranges that overlapped with the claimed percentages (i.e. carbon, cobalt, chromium, nickel, etc.). The prior art alloys were not specifically disclosed to have the same "N" value and properties claimed in applicant's invention. However, in that case the Court held that the prior art disclosed the desirability of the claimed N value, and the prior art also suggested the experimentation necessary to achieve the claimed composition.

In contrast, in the case at hand, the Office action does not cite to *any* identified prior art which discloses *any* beam-to-length ratio. This is in direct contrast to the *Boesch* case, in which the prior art disclosed ranges that *completely overlapped* with the claimed ranges. The Office action in this case does not cite to any prior art that discusses any beam-to-length ratio, or that recognizes any problems that can be caused by a low beam-to-length ratio. Thus the alleged

prior art does not anywhere disclose any "results effective variable," let alone any optimum value or any result which is sought to be optimized. Accordingly, it is submitted that there cannot be any "optimum" ranges deduced from any alleged prior art when no ranges at all are provided, and no recognition of a problem is provided.

In contrast, as noted at page 5, lines 14-19 of this Application, it is specified that the barge is dimensioned such that the reach stacker can move about the deck without causing the barge to list or lean to its side by an undesirable amount. As noted above, a fully loaded reach stacker is quite heavy, as the weight of the reach stacker alone is quite high, with additional weight being added by the load. Because the vessel is configured to support a heavy load (i.e., a reach stacker carrying a fully loaded container) on one side of the vessel, the claimed beam-to-length ratio provides a wide base which lends stability to the vessel. As noted at page 5, lines 18-19, a beam-to-length ratio of about 1/4 is approximately two times that of a typical ocean going vessel. Thus, the application sufficiently discloses the "criticality" of the claim limitation in the context of MPEP §2144.

In addition, since the allegedly admitted prior art does not disclose a driving a reach stacker onto a marine vessel, there would be no need to provide a large beam-to-length ratio. Thus it is submitted that the conclusion in the Office action that the claimed beam-to-length ratio is obvious, in light of *Boesch*, is not properly supported.

Claims 53, 55, 57, 59, 61, 63 and 65

The rejections of claims 53, 55, 57, 59, 61, 63, and 65, over alleged admitted prior art in view of *Boesch* suffer from the same defect as the rejection addressed above. More particularly, the alleged admitted prior art does not include any subject matter related at all to the claimed subject matter, and therefore does not disclose any "ranges" to be "optimized." In addition, the Office action does not cite to any additional prior art to supply the missing data. Instead, the Office action relies *only* on *Boesch* which, under MPEP § 2144, is improper due to the dissimilarity of the facts of that decision and the case at hand.

For example, with respect to the deck strength limitation (claims 55, 59 and 63) the Application discloses, at page 5, lines 12-14, that the deck strength of approximately 1,750 pounds per square foot is *several times* that of a typical commercial roll-on, roll-off vessel. This can be appreciated when it is understood that a typical commercial roll-on, roll-off vessel does not utilize a heavy duty reach stacker carrying a fully loaded container. As disclosed above, a fully-loaded reach stacker can weight up to 110,000 lbs. Since the allegedly admitted prior art does not disclose a driving a reach stacker onto a marine vessel, there would be no need to strengthen the deck to the degree specified in claims 55, 59 and 63.

With respect to the ramp length limitation (claim 57, 61 and 65), at page 6 line 27 – page 7 line 2 of this Application, it is noted that the length of the ramp (combined with enhanced traction capabilities of the ramp) enables a reach stacker to access the barge in various tidal and load conditions (i.e. even when the barge is unloaded at high tide). The relatively long ramp allow a relatively low angle of inclination, which can be important when a heavy, fully loaded reach stack traverses the ramp.

In contrast, the art relied upon in the rejection does not disclose any dock strength ranges, ramp length ranges, or any reasons why a dock strength ramp length should be "optimized."

Thus it is submitted that the conclusion in the Office action that the subject matter of claims 53, 55, 57, 59, 61, 63 and 65 is obvious, in light of *Boesch*, is not properly supported.

Claims 54, 58, 62, 66

With respect to claims 54, 58, 62 and 66, the Office action again does not refer to any prior art as supplying the missing features, but instead relies solely upon case law, citing to *In re Dailey*, 357 F.2d 669 (CCPA 1966). *Dailey* was directed to the patentability of bottles for use with infants. However, in that case the Court held that the claimed subject matter was obvious, and that the patentee provided no convincing argument that the particular configuration of their container was significant or anything more than one of numerous configuration a person of ordinary skill in the art would use. In contrast, in the Application at hand, as noted at page 5,

lines 19-25, the pointed bow, in combination with the beam-to-length ratio, enables the barge to be towed at speeds up to 50% above similar sized barges. At page 5, lines 19-20 it is noted that the pointed hull "differs from traditional barge design."

In addition, the art relied upon in the rejection does not disclose *any sort* of a barge shape. Thus there is no barge shape to be "changed," under *Dailey*, even if *Dailey* were to apply. Finally, since the Office action relies *only* on *Dailey* to supply the missing subject matter, under MPEP § 2144 it is improper to rely solely on that case due to the dissimilarity of facts. Accordingly, it is submitted that the rejection of claim 54, 58, 62 and 66 over *In re Dailey* is not properly supported.

Nature of the Invention

It is appreciated that the invention may appear, on its face, to be a relatively simple invention from a technological stand point. However, prior to this invention, fixed cranes (either located on a ship or located on shore) were largely used to load and unload containers onto the vessels. To Applicant's knowledge, as best understood by the undersigned, these cranes either stayed on shore or traveled with the ship. As previously noted, reach stackers are large, specially adapted, heavy-duty vehicles with spreader attachments that are configured to grip a container at its corner castings. Due to the large, heavy nature of such reach stackers, they have traditionally been considered to be "land based" vehicles which shuttled the containers between rail cars, tractor-trailers, cranes, etc. located on land.

It is submitted that Applicants have invented a method which is in fact novel and non-obvious, and, as noted above, required creative and non-traditional thinking to cross the "invisible barrier" for reach stackers by driving them across a ramp and onto a vessel. Various considerations, including providing a wide, reinforced ramp, a reinforced deck for the vessel, a smooth transition between the ramp and the deck, and a highly stable vessel configuration (i.e., beam-to-length ratio) had to be addressed by the Applicants.

Reference is made to the Declaration filed on October 1, 2003 in this case, copy of which is attached. Paragraph 3 of the attached Declaration provides evidence that in order to accommodate the weight of fully loaded reach stackers, vessels utilized in the system and method of the present invention must have decks that are reinforced to have weight-bearing limits beyond that of a typical deck of a vessel.

Paragraph 4 of the attached Declaration provides evidence that in order to accommodate the weight and size of fully loaded reach stackers, ramps utilized in the system and method of the present invention must be reinforced and widened to have weight-bearing limits and widths beyond those of typical ramps used for loading/unloading vessels.

Paragraphs 5 and 6 of the attached Declaration show evidence of commercial success. As can be seen, between about mid-1998 and about mid-2003 the TBC System (Assignee's commercial name for their shipping system implementing the present invention) generated revenue of over \$146 million. The number of equivalent units (i.e., a loaded module or an equivalent number of shipped motor vehicles) shipped over the same time period is over 70,500. Paragraph 7 of the Declaration provides evidence of the relatively small advertising expenditures used to advertise the benefits of the TBC System.

Paragraph 8 of the Declaration note that the customers which utilize the TBC System include large, sophisticated purchasers of shipping services, such as 3M, Caterpillar, Chrysler, Coca Cola, Dow Chemical, General Electric, General Motors, Georgia Pacific, Hewlett-Packard, Isuzu, Kraft, General Foods, Mercedes Benz, Proctor & Gamble, UPS and Wal-Mart. Accordingly, it is submitted that paragraphs 5-8 of the Declaration provide clear evidence of the commercial success of the invention.

Paragraph 9 of the Declaration specifies that the TBC System provides a present marine cost, including terminal costs, of about \$400 per forty-foot equivalent (FEU) for shipping in the Puerto Rico lane, which is believed to be significantly lower (up to about 20%) than cost per FEU in the Puerto Rico lane for competitors of the TBC System. The declaration notes that the

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cost per FEU of the TBC System is attributable to the features of the claimed invention, including the feature of driving loading reach stacker onto the vessels.

Due to the mature nature and extremely competitive nature of the shipping industry, it can be seen that the commercial success of the invention is attributable to the features of the claimed invention which provides a cost advantage. Furthermore, it can be seen that advertising revenues for the TBC System over the time period of interest are relatively modest. In particular, as noted at paragraph 7 of the attached Declaration, advertising expenditures over the period of interest are about \$70,817 which is only 0.49% of the total revenues over the same time period. Finally, paragraph 10 of the Declaration indicates that in the Declarant's professional opinion, the commercial success of the TBC system is largely due to the low cost per FEU benefits provided by the TBC system.

As noted at paragraph 12 of the Declaration, the present invention meets a long-felt need and provides a system for loading and unloading containers to and from marine vessels by reach stackers and does not require the use of cranes or roll-on roll-off processes.

As noted at paragraphs 13 and 14 of the Declaration, the invention provides unexpected results because the TBC System allows containers to be loaded at otherwise inaccessible ports, and thereby extends the chain of commerce. In other words, ports that lack a crane to load and unload container can be accessed since a reach stacker and ramp can instead be used. Thus ports that lack a crane (which is large and expensive) may nevertheless be joined as part of the "chain of commerce" by use of the present invention. This advantage is specified at page 8, lines 4-6 of the application.

Thus, it is submitted that the invention provides many advantages and features which result in its commercial success. The invention was the result of creative thinking and non-traditional use of reach stacker. Concrete savings are provided which have attracted high-profile customers.

In light of the arguments submitted herewith, it is submitted that the Application is now in a condition for allowance and a formal notice thereof is respectfully solicited.

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The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or to credit any overpayment to Deposit Account 20-0809. Applicant hereby authorizes the Commissioner under 37 C.F.R. §1.136(a)(3) to treat any paper that is filed in this application which requires an extension of time as incorporating a request for such an extension.

Respectfully submitted,



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